

## CLAIMS

What is claimed is:

1. An adjusting apparatus for an optical device comprising:  
an optical device;  
5 a carrier which said optical device is fixed on;  
a sliding plate which said carrier is attached on, a support which is positioned beside said carrier in the X-axis direction and fixed on a edge of said sliding plate, at least one spring connecting between said carrier and said support;  
a X-axis adjusting knob which is winded by a cable, said cable connecting to one side of said  
10 carrier;  
a base plate which is attached on said sliding plate , a support being positioned beside said sliding plate in Y-axis direction and fixed on a edge of said base plate, at least one spring connecting between said support and said sliding plate; and  
a Y-axis adjusting knob which is winded by a cable, said cable connecting to the other side of said  
15 sliding plate.
2. An adjusting apparatus of in claim 1 wherein said base plate installed into a bottom case, the upper surface of said base plate connecting to at least a spring, the other end of said spring connecting to a solid, the down surface of said base plate connecting to a cable, said cable extending through an opening in said bottom case and connecting to a Z-axis adjusting knob.
- 20 3. An adjusting apparatus of claim 2 wherein said X-axis adjusting knob, said Y-axis adjusting knob, and said Z-axis adjusting knob are ratchets for releasing rotational limit by pressing.
4. An adjusting apparatus of claim 2 further comprising at least one bolt which said cables are transferred the direction by.
5. An adjusting apparatus of claim 4 wherein said X-axis adjusting knob, said Y-axis adjusting  
25 knob, and said Z-axis adjusting knob position in the same side of the adjusting apparatus.
6. An adjusting apparatus of claim 1 further comprising a pair of guide rails which are positioned in the Y-axis from each side of said carrier longitudinally moved along the X-axis.
7. An adjusting apparatus of claim 1 wherein further comprising a pair of guide rails which are positioned in the X-axis from each side of said sliding plate vertically moved along the Y-axis.
- 30 8. An adjusting apparatus of claim 2 wherein said base plate is installed into said bottom case and, thus, said bottom case plate is moved along the Z-axis.
9. An adjusting apparatus for an optical device comprising:  
an optical device;  
35 a carrier which said optical device is fixed on;

a sliding plate which said carrier is attached on,  
a pair of bolts being positioned beside each side of said carrier longitudinally;  
a X-axis adjusting knob which is fixed on said sliding plate and winded by a cable, each end of said  
cable, passing by said bolts, respective connecting to the both sides of said carrier in X-axis  
5 direction;

a base plate which said sliding plate attached to,  
a pair of bolts being positioned beside each side of said sliding plate vertically; and  
a Y-axis adjusting knob which is fixed on said base plate and winded by a cable, each end of said  
cable, passing by said bolts, respective connecting to the both sides of said carrier in Y-axis  
10 direction.

10. An adjusting apparatus of claim 9 wherein said X-axis adjusting knob and said Y-axis  
adjusting knob are positioned in the same side of the adjusting apparatus.

11. An adjusting apparatus of claim 9 further comprising at least one tension adjusting bolt in a  
inclined threading hole, said cables passing through said tension adjusting bolt.

15 12. An adjusting apparatus of claim 9 further comprising a pair of guide rails being positioned in  
the Y-axis from each side of said carrier longitudinally moved along the X-axis.

13. An adjusting apparatus of claim 9 further comprising a pair of guide rails being positioned in  
the X-axis from each side of said sliding plate vertically moved along the Y-axis.